Course Instructor:

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Teaching Assistant(s):

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Course Structure: Three lectures per week on Monday, Wednesday and Friday at 2:00 - 2:50
Location: Warren Lecture Hall rm. 2205

Course Description: This course will introduce you to a wide variety of organisms that live in the oceans, the habitats they occupy, and how species interact with each other and their environment. Included will be examinations of adaptations, behavior, ecology, and a discussion of local and global resource management and conservation issues. Lectures and assigned readings will be supported by discussion sections to review course information and/or participate in activities outside the classroom.

iClicker will be use during the lecture. Deadline for registering is January 12th.


Additional course readings will be assigned in class and will be available as pdf’s on Ted

Grading:

Two midterm exams (multiple choice, matching and short answer format)

iClicker = 20 points (5%)
1st Midterm = 100 points (25%)
2nd Midterm = 100 points (25%)

Final exam (multiple choice, matching and short answer) = 100 points (25%)
Discussion Sections = 80 points (20%)

Total = 400 points

Discussion Sections: are mandatory and are primarily for the clarification of lecture material and readings; however, some required readings that are not discussed in class may be reviewed in section. Sections have been scheduled as follows:
<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture Topic</th>
<th>Text Reading</th>
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</thead>
<tbody>
<tr>
<td>Week 1</td>
<td></td>
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<tr>
<td>1) Jan 5</td>
<td>Science of Marine Biology; History of Ocean Exploration</td>
<td>Chapter 1</td>
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<tr>
<td>2) Jan 7</td>
<td>Introduction; Fundamentals of Biology</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>3) Jan 9</td>
<td>Microbes</td>
<td>Chapter 5</td>
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Discussion Topic: What is Science? and the role of traditional knowledge in Marine Biology?  
Dis. Reading: “Western science and traditional knowledge” by Mazzocchi

| Week 2    |                                                   |                  |
| 4) Jan 12 | Seaweeds and Plants                               | Chapter 6        |
| 5) Jan 14 | Marine Invertebrates I                            | Chapter 7        |
| 6) Jan 16 | Marine Invertebrates II                           | Chapter 7        |

Discussion Topic: Phytoplankton  

| Week 3    |                                                   |                  |
| Jan 19    | MLK Jr. Day – NO CLASS                            |                  |
| 7) Jan 21 | Marine Fishes I                                   | Chapter 8        |
| 8) Jan 23 | Guest Lecture                                     |                  |

Discussion Topic: Midterm Exam 1 review session

| Week 4    |                                                   |                  |
| Jan 26    | Midterm: Lectures 1-8                             |                  |
| 9) Jan 28 | Marine Fishes II                                  | Chapter 8        |
| 10) Jan 30| Marine Birds & Reptiles                           | Chapter 9        |

Discussion Topic: From Fish to Fishery  
Dis. Reading: “Bottom-Up Ecosystem Trophic Dynamics Determine Fish Production in the Northeast Pacific”

| Week 5    |                                                   |                  |
| 11) Feb 2 | Marine Mammals I                                  | Chapter 9        |
| 12) Feb 4 | Marine Mammals II                                 | Chapter 9        |
| 13) Feb 6 | Introduction to Marine Ecology                    | Chapter 10 (p. 211-230) |

Discussion Topic: Ocean Primary Production  
Dis. Reading: Biogeochemical Controls and Feedbacks on Ocean Primary Production by P.G. Falkowski et al.
>> Week 6
14) Feb 9  Introduction to Physical Oceanography  Chapters 3
15) Feb 11  Intro to Intertidal Communities  Chapter 11
16) Feb 13  Coral Reefs I  Chapters 14
Discussion Topic: Coastal Systems & People
Dis. Reading: “The oceans as peopled seascapes” by Shackeroff et al.

>> Week 7
Feb 16 President's Day – NO CLASS
17) Feb 18  Coral Reefs II  Chapter 14
18) Feb 20  Guest Lecture
Discussion Topic: Midterm Exam 2 review session

>> Week 8
Feb 23  Midterm: Lectures 9-18
19) Feb 25  Estuaries, Kelp Forests  Chapters 12
20) Feb 27  Epipelagic  Chapter 15
Discussion Topic: Mangroves
Dis. Reading: “Forests of the Tide: Mangroves” by Warne (National Geographic)

>> Week 9
21) Mar 2  Deep Ocean  Chapters 16
22) Mar 4  Resources from the Oceans  Chapter 17
23) Mar 6  Impacts of Humans on the Marine Environment  Chapter 18
Discussion Topic: Ocean Health Index (http://www.oceanhealthindex.org/)
Dis. Reading: “An index to assess the health and benefits of the global ocean” by Halpern et al.

>> Week 10
24) Mar 9  Climate Change and Ocean Acidification  Chapter 10 (p. 231-243)
25) Mar 11  Movie Day
26) Mar 13  Interactive tour of the Birch Aquarium
Discussion Topic: Final Exam review session

>> Week 11
Mar 16 Final Exam (50% = lectures 19-25; 50% Cumulative)